

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A quantum dot light-emitting diode comprising:
  - a top electrode;
  - a bottom electrode disposed substantially opposite the top electrode;
  - an inorganic quantum dot light-emitting layer provided between the top electrode and the bottom electrode; [[and]]
  - an inorganic electron transport layer disposed between the inorganic quantum dot light-emitting layer and the top electrode; and
    - an organic hole transport layer disposed between the inorganic quantum dot light-emitting layer and the bottom electrode,  
wherein the organic hole transport layer is made of a material selected from the group consisting of poly(3,4-ethylenedioxythiophene) (PEDOT)/polystyrene para-sulfonate (PSS) derivatives, poly-N-vinylcarbazole derivatives, polyphenylenevinylene derivatives, polyphenylene derivatives, polymethacrylate derivatives, poly(9,9-octylfluorene) derivatives, poly(spiro-fluorene) derivatives, N,N'-diphenyl-N,N'-bis(3-methylphenyl)-(1,1'-biphenyl)-4,4'-diamine (TPD), N,N'-di(naphthalene-1-yl)-N,N'-diphenyl-benzidine (NPB), tris(3-methylphenylphenylamino)-triphenylamine (m-MTDATA), and poly(9,9'-dioctylfluorene-co-N-(4-butylphenyl)diphenylamine (TFB).
2. (Currently Amended) The quantum dot light-emitting diode according to claim 1, wherein the quantum dot light-emitting diode further comprises:
  - a substrate disposed beneath the bottom electrode, [[; and]]  
wherein the [[a]] organic hole transport layer is disposed on the bottom electrode,  
and  
wherein the bottom electrode is an anode and the top electrode is a cathode, and

wherein the anode, the organic hole transport layer, the inorganic quantum dot light-emitting layer, the inorganic electron transport layer and the cathode are formed in this order on the substrate.

3. (Previously Presented) The quantum dot light-emitting diode according to claim 1, wherein the inorganic electron transport layer is made of an oxide selected from the group consisting of  $\text{TiO}_2$ ,  $\text{ZnO}$ ,  $\text{SiO}_2$ ,  $\text{SnO}_2$ ,  $\text{WO}_3$ ,  $\text{Ta}_2\text{O}_3$ ,  $\text{BaTiO}_3$ ,  $\text{BaZrO}_3$ ,  $\text{ZrO}_2$ ,  $\text{HfO}_2$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{Y}_2\text{O}_3$  and  $\text{ZrSiO}_4$ ; the nitride  $\text{Si}_3\text{N}_4$ ; or a semiconductor compound selected from the group consisting of  $\text{CdS}$ ,  $\text{ZnSe}$  and  $\text{ZnS}$ .

4. (Previously Presented) The quantum dot light-emitting diode according to claim 1, wherein the inorganic quantum dot light-emitting layer is made of a material selected from the group consisting of: Group II-VI compound semiconductor nanocrystals, including  $\text{CdS}$ ,  $\text{CdSe}$ ,  $\text{CdTe}$ ,  $\text{ZnS}$ ,  $\text{ZnSe}$ ,  $\text{ZnTe}$ ,  $\text{HgS}$ ,  $\text{HgSe}$  and  $\text{HgTe}$ ; Group III-V compound semiconductor nanocrystals, including  $\text{GaN}$ ,  $\text{GaP}$ ,  $\text{GaAs}$ ,  $\text{InP}$  and  $\text{InAs}$ ;  $\text{PbS}$ ;  $\text{PbSe}$ ;  $\text{PbTe}$ ;  $\text{CdSe/ZnS}$ ;  $\text{CdS/ZnSe}$ ; and  $\text{InP/ZnS}$ .

5. (Previously Presented) The quantum dot light-emitting diode according to claim 1, wherein the inorganic electron transport layer is formed by a solution coating process selected from the group consisting of sol-gel coating, spin coating, printing, casting and spraying, or a vapor coating process selected from the group consisting of chemical vapor deposition (CVD), sputtering, e-beam evaporation and vacuum deposition.

6. (Cancelled)

7. (Previously Presented) The quantum dot light-emitting diode according to claim 2, wherein the inorganic electron transport layer is made of an oxide selected from the group consisting of  $\text{TiO}_2$ ,  $\text{ZnO}$ ,  $\text{SiO}_2$ ,  $\text{SnO}_2$ ,  $\text{WO}_3$ ,  $\text{Ta}_2\text{O}_3$ ,  $\text{BaTiO}_3$ ,  $\text{BaZrO}_3$ ,  $\text{ZrO}_2$ ,  $\text{HfO}_2$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{Y}_2\text{O}_3$  and  $\text{ZrSiO}_4$ ; the nitride  $\text{Si}_3\text{N}_4$ ; or a semiconductor compound selected from the group consisting of  $\text{CdS}$ ,  $\text{ZnSe}$  and  $\text{ZnS}$ .

8. (Previously Presented) The quantum dot light-emitting diode according to claim 2, wherein the inorganic quantum dot light-emitting layer is made of a material selected from the group consisting of: Group II-VI compound semiconductor nanocrystals, including CdS, CdSe, CdTe, ZnS, ZnSe, ZnTe, HgS, HgSe and HgTe; Group III-V compound semiconductor nanocrystals, including GaN, GaP, GaAs, InP and InAs; PbS; PbSe; PbTe; CdSe/ZnS; CdS/ZnSe; and InP/ZnS.

9. (Previously Presented) The quantum dot light-emitting diode according to claim 2, wherein the inorganic electron transport layer is formed by a solution coating process selected from the group consisting of sol-gel coating, spin coating, printing, casting and spraying, or a vapor coating process selected from the group consisting of chemical vapor deposition (CVD), sputtering, e-beam evaporation and vacuum deposition.

10. (Previously Presented) A quantum dot light-emitting diode comprising:  
a top electrode;  
a bottom electrode disposed substantially opposite the top electrode;  
an inorganic quantum dot light-emitting layer provided between the top electrode and the bottom electrode; and  
an inorganic electron transport layer disposed between the inorganic quantum dot light-emitting layer and the top electrode,  
wherein the inorganic electron transport layer includes an oxide selected from the group consisting of TiO<sub>2</sub>, ZnO, SiO<sub>2</sub>, SnO<sub>2</sub>, WO<sub>3</sub>, Ta<sub>2</sub>O<sub>3</sub>, BaTiO<sub>3</sub>, BaZrO<sub>3</sub>, ZrO<sub>2</sub>, HfO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub> and ZrSiO<sub>4</sub>; the nitride Si<sub>3</sub>N<sub>4</sub>; or a semiconductor compound selected from the group consisting of CdS, ZnSe and ZnS.